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ABSTRACT

~~A new method is provided for the interface between a heat spreader and the substrate of a thermally improved PBGA package is provided.~~ The heat spreader interfaces with the substrate with the standoff of the heat spreader. The stand-off of the heat spreader is provided with an opening, the stand-off of the heat spreader is aligned with the substrate of the PBGA package by means of a copper pad that is provided over a second surface of the substrate. A ~~gold stud bump or a solder bump are~~ is further provided over the surface of the copper pad ~~for alignment purposes.~~ Thermally conductive epoxy ~~or solder~~ is deposited over the opening of the heat spreader and ~~therewith over the copper pad provided over a second surface of the substrate.~~ Under an additional embodiment of the invention, ~~extremities if~~ If the heat spreader stand-off ~~are~~ is aligned with contact pads ~~provided over the second surface of the substrate of the package,~~ thermally conductive epoxy is deposited over ~~the contact surfaces between the extremities and the contact pads.~~